

# Innovations and firm performance in sub-Saharan Africa

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## SUMMARY

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This thesis starts from the premise that innovations offer good prospects for sustainable economic progress and economic transformation. The thesis provides empirical evidence on the innovation activities of firms in sub-Saharan Africa, with specific emphasis on the innovative process, the market performance of new products and the labour market impacts of new products.

Chapter 1 provides a general introduction to the thesis.

Chapter 2 investigates and presents new evidence on the impact of product innovations on employment. The chapter extends and applies a novel dose response model under different intensities of innovation using the World Bank's Enterprise Survey (ES) merged with the newly available Innovation Follow-Up Survey data, covering the period 2010-2012, for 5 sub-Saharan African countries. The main finding is consistent with the stylised fact in the empirical literature, with product innovations having compensation impact on total employment. We, however, found this conclusion to be invalid beyond sub-interval of firms' product innovation intensities. In extension, we found that product innovation is biased towards temporary employment, though it creates both permanent and temporary jobs.

Chapter 3 examines the relationship between informal product market competition and sales from innovative products introduced by formal firms, using pooled data from the World Bank's Enterprise Survey and the Innovation Follow-up Survey for 5 sub-Saharan African countries. The results reveal a robust 'Schumpeterian effect' (monotonically negative effect) of informal competition on the market performance of product innovations. Results from sectoral, ownership type and size of firm analyses also show similar 'Schumpeterian effects'. However, extension to industry-level informal competition indicates an 'escape-competition effect' of informal competitive activities on the performance of product innovations. We also found through indirect mechanisms that firms with larger market share tend to have 'escape-competition effects'. We argue that informal competition matters for the performance of product innovations but only for formal firms that lack strategic collaborative 'footholds' in the informal economy.

Chapter 4 focuses on understanding and providing insights into the types of innovations informal enterprises use, and adapt to meet the needs of customers. The chapter describes the data collection procedure, followed by descriptive statistics of enterprise-level data collected in urban Ghana (Accra and Tema). The descriptive statistics indi-

cate that innovations are pervasive in the informal economy of Ghana, with informal enterprises generating innovative ideas internally.

Chapter 5 investigates the effect of apprenticeship and formal interactions as learning processes on the innovation activities of informal enterprises in Ghana. Based on modern econometric methodologies and a unique data set on 513 enterprises, the findings suggest that both apprenticeship and competitive formal interactions enhance product innovativeness. Innovation policy in Ghana, therefore, needs to promote learning processes in informal enterprises.

Chapter 6 concludes the thesis with some policy recommendations and suggested areas for future research.